

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/AU03/01544

| <b>A. CLASSIFICATION OF SUBJECT MATTER</b>  |  |   |
|---|--|---|
| Int. Cl. <sup>7</sup> : C12Q 001/68   |  |   |
| According to International Patent Classification (IPC) or to both national classification and IPC   |  |   |
| <b>B. FIELDS SEARCHED</b>   |  |   |
| Minimum documentation searched (classification system followed by classification symbols)<br><b>SEE ELECTRONIC DATABASE BOX BELOW</b>   |  |   |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched<br><b>SEE ELECTRONIC DATABASE BOX BELOW</b>   |  |   |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)<br>[WPIDS][CA][MEDINE] DEAF?; HEARING; LOSS; IMPAIR?; DNA CHIP; GENE CHIP; MICROARRAY;<br>ARRAY; OLIGONUCLEOTIDE ARRAY   |  |   |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>   |  |   |
| Category*   | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.   |
| X   | DeRisi J (2000). Unit 22.1: Overview of nucleic acid arrays. In: Current Protocols in Molecular Biology. Supplement 49, pp 22.1.1–22.1.3. John Wiley & Sons, Inc.                | 1–14, 16  |
| Y   | See the entire document.   | 1–25  |
| X   | Hone S and Smith R (2002). Medical evaluation of pediatric hearing loss. Laboratory, radiographic, and genetic testing. Otolaryngologic Clinics of North America 35(4): 751–764. | 1–25  |
| Y   | See the entire document.   | 1–25  |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex   |  |   |
| <p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p> |  |   |
| Date of the actual completion of the international search<br>17 December 2003   |  | Date of mailing of the international search report<br>6 JAN 2004                    |
| Name and mailing address of the ISA/AU<br>AUSTRALIAN PATENT OFFICE<br>PO BOX 200, WODEN ACT 2606, AUSTRALIA<br>E-mail address: pct@ipaustrialia.gov.au<br>Facsimile No. (02) 6285 3929  |  | Authorized officer<br><br><b>PHILIPPA WYRDEMAN</b><br>Telephone No : (02) 6283 2554 |

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International application No.  
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| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |   |                       |
|---|---|-----------------------|
| Category*   | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|   | WO200250305 A1 (MURDOCH CHILDRENS RESEARCH INSTITUTE) 20 December 2000.   |                       |
| X   | See the entire document.  | 1-25                  |
| Y   |   | 1-25                  |
|   | Dong J et al (2001). Nonradioactive detection of the common Connexin 26 167delT and 35delG mutations and frequencies among Ashkenazi Jews. Molecular Genetics and Metabolism 73(2): 160-163 (abstract).                                       |                       |
| X   | See the abstract.   | 1-25                  |
| Y   |   | 1-25                  |
|   | Bacino C et al (1995). Susceptibility mutations in the mitochondrial small ribosomal RNA gene in aminoglycoside induced deafness. Pharmacogenetics 5(3): 165-172 (abstract).  |                       |
| X   | See the abstract.   | 1-25                  |
| Y   |   | 1-25                  |
|   | Kenna M et al (2001). Connexin 26 studies in patients with sensorineural hearing loss. Archives of Otolaryngology — Head & Neck Surgery 127(9): 1037-1042 (abstract).   |                       |
| X   | See the abstract.   | 1-25                  |
| Y   |   | 1-25                  |
|   | Wiszniewski W et al (2001). High frequency of GJB2 gene mutations in Polish patients with prelingual nonsyndromic deafness. Genetic Testing 5(2): 147-148 (abstract).   |                       |
| X   | See the abstract.   | 1-25                  |
| Y   |   | 1-25                  |
|   | Pampanos A et al (2002). Prevalence of GJB2 mutations in prelingual deafness in the Greek population. International journal of Pediatric Otorhinolaryngology 65(2): 101-108 (abstract).   |                       |
| X   | See the abstract.   | 1-25                  |
| Y   |   | 1-25                  |
|   | Scott D et al (2000). Functional differences of the PDS gene product are associated with phenotypic variation in patients with Pendred syndrome and non-syndromic hearing loss (DFNB4). Human Molecular Genetics 9(11): 1709-1715 (abstract). |                       |
| X   | See the abstract.   | 1-25                  |
| Y   |   | 1-25                  |

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| C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT |  |                       |
|--|--|-----------------------|
| Category*  | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
| X<br>Y   | Dreyer B et al (2001). A common ancestral origin of the frequent and widespread 2299delG USH2A mutation. American Journal of Human Genetics 69(1): 228-234 (abstract).   |                       |
|  | See the abstract.  | 1-25                  |
| X<br>Y   | Chen Z-Y and Corey D (2002). Understanding inner ear development with gene expression profiling. Journal of Neurobiology 53: 276-285.  |                       |
|  | See the entire document.   | 1-25                  |
| A  | Database Accession # AC026202. Chen C et al (18 October 2002). Homo sapiens chromosome 3 clone RP11-572B2 map 3p, complete sequence.   |                       |
|  | See the entire document, in particular nucleotides 150000 to 149984 (reverse complement) which are complementary to SEQ ID NO 55.  |                       |
|  | Note: for the Y indications, any one of DeRisi (2000), Hone and Smith (2002), WO200250305 or Chen and Corey (2002) may be combined with any one of Dong et al (2001), Bacino et al (1995), Kenna et al (2001), Wisziewski et al (2001), Pampanos et al (2002), Scott et al (2000) or Dreyer et al (2001), with relevance to claims 1-25. |                       |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

**PCT/AU03/01544**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in<br>Search Report |           |    |          | Patent Family Member |          |    |          |
|---|-----------|----|----------|----------------------|----------|----|----------|
| WO  | 200250305 | AU | 20020701 | CA                   | 20020627 | EP | 20031022 |